



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

C3-8-2-2-PO
Job Sheet 182946



Part No: C3-8-2-2-PO

Job Qty: 60 ea

Part Name: Solenoid Pin Spacer



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 9/6/18

Job Tracking No:

Due Date: 11/1/18

Created By: Patrick Lussier

Type: Stock

Description:

Note: DWG C3-8-2 Rev. 3 IPP Rev. 4 18.05.09 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	60 pcs		11/1/18	0.00	0.00	Purchasing		OCT 24 2018
110	Packaging	60 pcs		11/1/18	0.00	0.00	Packaging2		OCT 24 2018
120	QC	60 pcs		11/1/18	0.00	0.00	QC6		38
130	Packaging	60 pcs		11/1/18	0.00	0.00	Packaging3		389 6A192
140	QC21-FG	60 Ea		11/1/18	0.00	0.00	QC21		21 OCT 26 2018

Part Op 100 - Issue P/O: 040952 MANUFACTURE C3-8-2-2 AS PER DWG Supplier: METEC Certificate of conformity is Descriptions: required

SEPT 10 2018 x 60 R h

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
C3-8-2-2P	Solenoid Drilling Jig C3 Hook	60 pcs (1 ea)	100-Purchasing	5/20951

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	C3-8-2-2P	60	1	0

Part Specifications

Specifications could not be found.



Container No: S120952



Part: C3-8-2-2

Job No: 182946

Serial No/Batch: S120952

Revision: 3

Inspector:

Exp Date:

Instructions:

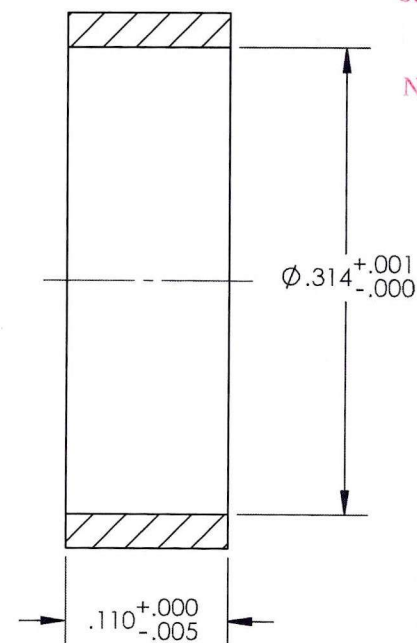
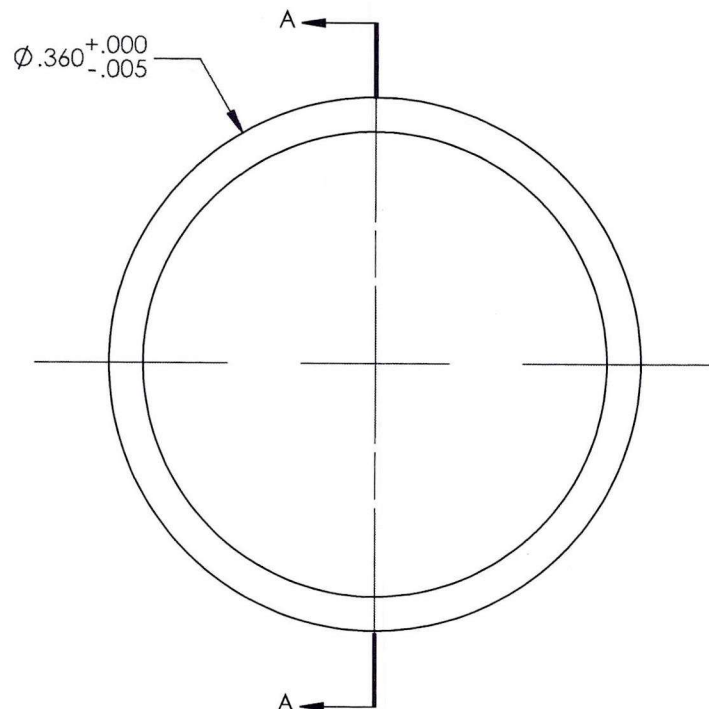
Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 10/24/18

Plex 9/6/18 3:31 PM dart.Lussier.Patrick

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



SECTION A-A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 179845 *nws*
1806-22

C3-8-2-2

SPACER

DART AEROSPACE	
TITLE SOLENOID ASSEMBLY	
DWG NO. C3-8-2	REV 3
MAT'L 303 S.S.	DRAWN BY: CANAM
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weid</i>
.XXX ± .005 FRACTIONS ± 1/8	HEAT
.XX ± .01 ANGLES ± 5°	TREAT
.X ± .1	FINISH
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	SPEC
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL
SCALE 8:1	DATE 10/31/2001
SHEET 3 OF 4	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040952**

Supplier: PJM001-VC
P.J. Machinage
1381 Rte Cite-Des-Jeunes
St-Lazare
QC
J7T 2B8
Phone: 450-455-0705

PO No: PO040952
PO Date: 9/10/18
Due Date: 11/5/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Lussier, PatrickPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments: *Revision*

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	182940	C10-10-1P			Actuator Shaft	Firmed	-	11/5/18	25 pcs	0 pcs	25 pcs	\$64.60/pcs	\$1,615.00
2	182941	C10-9-4P			Latch Shaft Bushing	Firmed	-	11/5/18	50 pcs	0 pcs	50 pcs	\$18.77/pcs	\$938.50
3	182942	C10-6P			Trunnion	Firmed	-	11/5/18	33 pcs	0 pcs	33 pcs	\$72.39/pcs	\$2,388.87
4	182943	C10-8P			Trunnion Bushing	Firmed	-	11/5/18	40 pcs	0 pcs	40 pcs	\$22.80/pcs	\$912.00
5	182944	C45-4-2P			Trunnion, Load Beam	Firmed	-	11/5/18	20 Ea	0 Ea	20 Ea	\$56.53/Ea	\$1,130.60
6	182945	C45-13-1P			Keeper Bushing	Firmed	-	11/5/18	40 pcs	0 pcs	40 pcs	\$20.90/pcs	\$836.00
7	182946	C3-8-2-2P			Solenoid Drilling Jig C3 Hook	Firmed	-	11/5/18	62 pcs	0 pcs	62 pcs	\$9.98/pcs	\$618.76
8	182947	C2-3-3P			Latch Roller	Firmed	-	11/5/18	50 Ea	0 Ea	50 Ea	\$19.95/Ea	\$997.50
9	182948	C3-12-4P			Lock Roller	Firmed	-	11/5/18	60 pcs	0 pcs	60 pcs	\$18.86/pcs	\$1,131.60
10	182949	C3-3-7P			Link	Firmed	-	11/5/18	50 pcs	0 pcs	50 pcs	\$23.90/pcs	\$1,195.00
11	182950	PC250-775P			Lever Arm Bushing	Firmed	-	11/5/18	15 pcs	0 pcs	15 pcs	\$77.90/pcs	\$1,168.50
12	182951	C45-18-5P			Boss	Firmed	-	11/5/18	52 Ea	0 Ea	52 Ea	\$11.40/Ea	\$592.80
												Grand Total:	\$13,525.13

DAS
38
9-89



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO040952

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

A handwritten signature in black ink, appearing to be "RL" or similar, located to the right of the terms and conditions text.

Plex 10/23/18 3:53 PM dart.Lussier.Patrick

P.J. Machinage (9052 9470 Qc Inc).
1381, Rte Cité-Des-Jeunes,
St-Lazare, Qc
J7T 2B8

Tel. : 450 455-0705

Customer : 628

Dart Aerospace Ltd.
Accounts payable
1270 Aberdeen St
Hawkesbury, Ontario
K6A 1K7

Shipping Order

12/09/2018

Order

: 7029

Reference

: PO : PO040952 S/O : 7029

Bid

: 15074

Ship

: Votre camion

Ship To

Same

Fax: 1 613 632-5246

Item No.	Description	Qty	Qty. Delivere	B/O Qty
001	C45-4-2 Rev. 20 Trunnion Load Beam (J-7029-A)	20	<u>Ø</u>	<u>20</u>
002	C10-10-1 Rev. 3A Actuator Shaft (J-7029-B)	25	<u>Ø</u>	<u>25</u>
003	C45-13-1 Rev. 4A Keeper Bushing (J-7029-C)	40	<u>Ø</u>	<u>40</u>
004	C10-9-4 Rev. 2A Latch Shaft Bushing (J-7029-D)	50	<u>Ø</u>	<u>50</u>
005	C3-8-2-2 Rev. 3 Solenoid Pin Spacer J-7029-E)	60	<u>62 ✓</u>	<u>Ø</u>
006	C2-3-3 Rev. 4A Latch Roller (J-7029-F)	50	<u>Ø</u>	<u>50</u>
007	C10-6 Rev. 3 Trunnion (J-7029-G)	30	<u>33 ✓</u>	<u>Ø</u>
008	C3-12-4 Rev. 1A Lock Roller (J-7029-H)	60	<u>Ø</u>	<u>60</u>
009	C3-3-7 Rev. 4A Link (J-7029-I)	50	<u>Ø</u>	<u>50</u>
010	PC250-775 Rev. 1A (J-7029-J)	15	<u>Ø</u>	<u>15</u>
011	C45-18-5 Rev. 1 Boss (J-7029-K)	50	<u>52 ✓</u>	<u>Ø</u>
012	C10-8 Rev. 1A Trunnion Bushing (J-7029-L)	40	<u>Ø</u>	<u>40</u>

P.J. Machinage retains ownership of all goods sold and other work-product delivered to or performed for its customer until full and complete payment of the underlying invoice, even in circumstances where the part to be machined or materials were provided by the customer. In cases where the part of materials belonged to the customer before it is remitted to P.J. Machinage for the purpose of performing work thereon, its delivery to P.J. Machinage shall entail a transfer of the underlying rights of ownership of the customer over said part or materials.

Shipping : Votre Camion
Package No : _____

Ref. : _____

Merchandise Received: 24/10/2018

PJ Machinage**Certificate of conformance****Sold to:**

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON, K6A 1K7

Supplier address:

PJ Machinage
1381 Route Cité-Des-Jeunes
St-Lazare, Qc, J7T 2B8

Purchase Order: PO040952 ✓

This is to certify that the below names items were inspected and/or tested to your drawings, specifications and purchase order. Objective evidence are shipped with the products and are on fil to support the verifications and/or tests and can be made available on request, unless otherwise noted.

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
C3-8-2-2 Rev.3 ✓	62 ✓	<u>Solenoid Pin</u>
C10-6 Rev.3 ✓	33 ✓	<u>Trunnion</u>
C45-18-5 Rev.1 ✓	52 ✓	<u>Boss</u>

DAS
38
9-89

 , October 23 , 2018

CLIENT:

628

JOB No.:

70201-E

PLAN No.:

P.O.:

040952

QUANTITÉ:

62

NOM DE LA PIÈCE:

CONTRÔLE DE QUALITÉ

C3- 8-2-2 Rev.3 Solenoid Spacer

MATÉRIEL:

DATE:

01-10-2018

FORMAT No.:

001

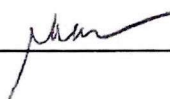
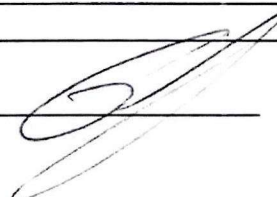
PAGE No.:

DIMENSIONS DE DESSIN ET TOLERANCE

PIÈCE No.	$\phi 0.760^{+0.005}_{-0.005}$	$\phi 0.714^{+0.001}_{-0.001}$	$0.110^{+0.002}_{-0.002}$						
		pin $\phi 0.714$							
		pin $\phi 0.715$							
DIMENSIONS DE LA PIÈCE									
	$\phi 0.757$	$\phi 0.714 \pm 0$	0.108						
	$\phi 0.758$	$\phi 60$	0.107						
	$\phi 0.758$	60	0.107						
	$\phi 0.758$	60	0.108						
	$\phi 0.757$	60	0.108						
		pin $\phi 0.715$							
		no ϕ							
		no ϕ							
		no ϕ							
		no ϕ							
		no ϕ							
		no ϕ							
	358	3/4	109						
	359	3/4	108						

OBSERVATION:

SIGNATURE RESPONSABLE:

Acciaierie Valbruna S.p.A.



36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Customer/Purchaser/Clien:
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
L5T 5Z1-MILTON, ONT L5T 5Z1-CAN

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Manufacturer/produit

Avviso di Spedizione: D-VI09026284
Lieferanzeige/Posting list/L

Ordine nr: 911002485 Stock - Canada
Bestell/Nr. order/Commande

Tipo di Elaborazione: E+AOD
Erzeugnisart/Working process/Mode d'elaboration

CERTIFICATO DI COLLAUDO ABNAHMEPRUEFZEUGNIS INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION EN 10204 (2005) , 3.1

Certificato nr: MEST813190/2009/
Prüfung/Test/Essai

Conferma ordine nr. EI09006769
Werkz/Our Order/Ref nr

Marchio di Fabbrica:
Zeichen des Werks/Marken
Trade mark
Sigle de l'usine/produit

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Plombon de l'inspecteur



Oggetto Prove: - Annealed Cold Drawn
Prüfungszustand/Inspected/Finissage

Specifiche:
Anforderungen / Requirements / Exigences

VSI 0 303 HS A,CF
ASME SA320 2007 B8F e
ASTM A370 2009A
QQ-S-764 B/2 303 A
(0) SEC.II PT.A 2007 EDITION ADD. 2008a
(1) Chemical analysis only.

AMS 5640 U S30300 A
ASTM A314 2008 S30300
ASTM A582 2005 S30300 A

AMS 5640 U TYPE1 A
ASTM A320 2008 B8F (1)
MIL-S-862 B/1 303

0Chemical analysis only.

Qualità: 303
Werkstoff/Grade/Qualité

Marca: MV188ZHS MAXIVAL
Markenbezeichnung/Brand/Numéro

Punzonatura: 303
Kennzeichnung/Marking/Marquage

Pos. nr. Item nr. Nr. de poste	Oggetto Designation Produit description Désign. du produit	Dimensioni - In Abmessungen Dimension	Tolleranza Toleranz Aptitude	Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losnr. Lot nr.
0010	Round	0,3750	484-08	147 / 147	420753		2.068	925800292

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été livré conforme aux exigences

Controllo antimescolanza: OK
Verwechslungsprüfung: spektralanalytisch durchgeführt
Ammalgam testing performed: OK
Contrôle antimeslange fait: r.a.s.

Controllo visivo e dimensionale: soddisfatta le esigenze:
Besichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional check satisfactory
Contrôle visuel et dimension: satisfaisant

TEST ALLO STATO DI FORNITURA Test on delivery condition Prüfung auf lieferbarem Produkt test à l'état de livraison Prueba sobre el material así como entregado									
TEST	Prove/Probes Prüfung/Proben Long. diam. Diam. Meth. Diam. Thickness Long. diam. mm	°F	Prove/Probes Prüfung/Proben Yield stress Rp 0,2% k.s.i.	Snervamento Biegezug Yield stress Line elastic	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm k.s.i.	Allungamento Biegezug Elongation Allongement E 4d %	Strizione Gründelung Perforation et ans Sulcon RA %	Resilienza Kerndruckfestigkeit Impact Value Pout joule	Durezza Härte Hardness Dureté HB
Valori richiesti 1 Anforderungen/Required values Valeurs demandées	min max								140 255
A	8,75	68	L	87	112	32	50		254
TEST				min	max				
A	Grain size for ASTM E112					6			

Mechanical properties according to ASTM A370.

IX=longitudinale, T=transversale, Q=Tangente/longitudinal

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Heat Schmelze/Coilée	min 0,030 max 0,050	0,20 1,00	1,50 2,00	17,00 19,00	0,00 1,00	8,00 10,00	- 0,100	0,32 0,40	- 0,4000	- -	- -	- -	- -	- -
C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	Zr %				
420753	0,036	0,45	1,87	17,42	0,35	0,61	8,36	0,10	0,025	0,34	0,0040			

Produced without class I-II Ozone depleting substances.

Solution heat treated free from continuous carbide network.

Annealing temperature: 1940°F for 0.5 h/water.

Micro and macro etch test: OK

Material is DFARS Compliant

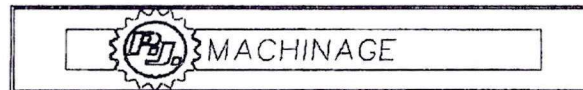
Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.
The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1, s. 4.3 by TÜV and LLOYD'S

Q.C. Reviewed

Vicenza, 04/12/09 V00008 (Mod. MCER)	Il collaudatore di stabilimento / der Werksachverständige / Works inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 1
--	--	-----------------

CLIENT: 628
 JOB No.: 7039-6
 PLAN No.: PS
 P.O.: P0000952
 QUANTITÉ: 33



DATE: _____
 FORMAT No.: 001
 PAGE No.: _____

CONTRÔLE DE QUALITÉ

NOM DE LA PIÈCE: C16-6 REV.3 TRUNNION

MATÉRIEL: 4140

DIMENSIONS DE DESSIN ET TOLERANCE									
PIÈCE No.	4.063	φ-1.50	φ-70	φ-80.5 ^{+0.02}	φ-1.0015 ^{±0.0005}	-240 ^{+0.005}	125	1.150 ^{+0.02}	
DIMENSIONS DE LA PIÈCE									
1	4.063	φ-1.50	φ-70	φ-80.5	φ-1.001	-238		120	1.1485
5	4.063	φ-1.50	φ-70	φ-80.5	φ-1.001	-238		127	1.1485
15	4.063	φ-1.50	φ-70	φ-80.5	φ-1.001	-238		127	1.1487
20	4.063	φ-1.50	φ-70	φ-80.5	φ-1.001	-238		127	1.1487
25	4.063	φ-1.50	φ-70	φ-80.5	φ-1.001	-238		127	1.1487
33	4.063	φ-1.50	φ-70	φ-80.5	φ-1.001	-238		122	1.1487
	4.063	1.149	699	8085	1.001				

OBSERVATION: _____

SIGNATURE RESPONSABLE: _____

Signature

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

7029-G (1/2)

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

21733

PART NUMBER/NUMÉRO DE PIÈCE

506264

Invoice Number
S243570

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.
2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 11' 8" / 8' 3"
HEAT: 4909652

ITEM: 506264

Line Total: 165 LB

Specifications:
ASTM A322 91

ASTM A304 96

CHEMICAL ANALYSIS

C	MN	P	S	SI	CU	NI	CR
0.41	0.9	0.014	0.026	0.24	0.17	0.18	0.98
40	AL	V	N	CB	SN		
0.24	0.025	0.008	0.008	0.002	0.007		

RCPT: R781410

MILL: REPUBLIC TECHNOLOGIES INT'L

COUNTRY OF ORIGIN: USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN
					179

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

I recording of false, fictitious, or fraudulent statements in connection with test results - punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCK

Neil Brock

MARACER. QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

1029-G 012
733

Page 02 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

21733

PART NUMBER/NUMÉRO DE PIÈCE

506264

Invoice Number
S243570

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 11' 8" / 8' 3"

Line Total: 165 LB

HEAT: 4909652

ITEM: 506264

END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
55	55	55	55	55	54	54	54	54	53	53	52	52	51	50
16	18	20	22	24	26	28	30	32						
49	47	46	44	43	42	41	40	39						

RAIN SIZE : 7 -

STRAND CAST MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

REDUCTION RATIO: 19.0 TO 1
MELT SOURCE: RTI-FRANKLIN
MELT COUNTRY: USA
HOT ROLL SRCE: RTI-LACKAWANNA
HOT ROLL COUNTRY: USA
MELT METHOD: STRAND

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The recording of false, fictitious, or fraudulent statements in connection with test results is as a felony under federal statutes. /Les informations fausses, fictives ou mensongères en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331140	1

CLIENT / customer 236

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135401	N/A	4140		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
SEL HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results				
HARDNESS		42 - 46 HRC	11	45 - 46 HRC
(907)				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
120	35	PIECES (87) PIECES		
		2 BOITE DE CARTON		

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

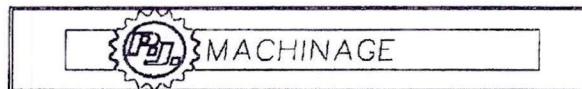
DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

CLIENT: G28
JOB No.: 7029-K
PLAN No.:
P.O.: P0040952
QUANTITÉ: 52



DATE: 01-10-2018
FORMAT No.: 001
PAGE No.:

CONTRÔLE DE QUALITÉ

NOM DE LA PIÈCE: C45-18-5-REV: 1 BOSS MATÉRIEL: 1018

DIMENSIONS DE DESSIN ET TOLERANCE									
PIÈCE No.	$\phi 1.125$	$\phi 0.752$	$\phi 0.990$	0.188	0.375				
DIMENSIONS DE LA PIÈCE									
	$\phi 1.126$	$\phi 0.752$	$\phi 0.996$	0.188	0.376				
	$\phi 1.125$	$\phi 0.752$	$\phi 0.996$	0.188	0.375				
	$\phi 1.125$	$\phi 0.752$	$\phi 0.991$	0.188	0.376				
	$\phi 1.126$	$\phi 0.752$	$\phi 0.991$	0.188	0.376				
	$\phi 1.125$	$\phi 0.752$	$\phi 0.990$	0.188	0.375				
	1.125	752	989	188	375				
	1.124	752	989	188	375				
	1.121	752	990	188	375				

OBSERVATION:

SIGNATURE RESPONSABLE:

4848

RHR-114

7029-K

51162

TRA-2804

**GERDAU**

CA-ML-CAMBRIDGE
160 ORION PLACE
CAMBRIDGE, ON N1T 1R9
Canada

CERTIFIED MATERIAL TEST REPORT

Page 1/1

CUSTOMER SHIP TO LES ACIERS TRANSBEC 1997 LTEE 22 J F KENNEDY BLVD SAINT-JEROME, QC J7Y 4B4 Canada		CUSTOMER BILL TO LESACIERS TRANSBEC 1997 LTEE 4054 BOUL I.E CORBUSIER LAVAL, QC H7L 5R2 Canada		GRADE GGMULTI	SHAPE / SIZE Round Bar / 1 1/4" <i>RHR/114</i>	DOCUMENT 1 0000066269
SALES ORDER 6255805/000170		CUSTOMER MATERIAL N°		LENGTH 20'00"	WEIGHT 4,804 LB	HEAT / BATCH 52081985/03
CUSTOMER PURCHASE ORDER NUMBER OU50405FSQ2MP			BILL OF LADING 1301-0000035369	DATE 05/02/2018		
SPECIFICATION / DATE or REVISION ASME SA36, ASTM A529-14 ASTM A6-17, A36-14, A572-15 ASTM A709-17, AASHTO M270-15 CSA G40.20-13/G40.21-13						

CHEMICAL COMPOSITION	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	CEgyA6
%	%	%	%	%	%	%	%	%	%	%	%	%
	0.14	0.72	0.016	0.029	0.18	0.42	0.13	0.12	0.020	0.000	0.016	0.32

MECHANICAL PROPERTIES	Elong.	G/L Inch	UTS PSI	UTS MPa	YS PSI	YS MPa
%						
	23.00	8.000	74813	516	55639	384
	23.50	8.000	74641	515	55492	383

GEOMETRIC CHARACTERISTICS	R:R
	21.30

COMMENTS / NOTES

This grade meets the requirements for the following grades:
 ASTM Grades: A36; A529-50; A572-50; A709-36; A709-50
 CSA Grades: 44W; 50W
 AASHTO Grades: M270-36; M270-50
 ASME Grades: SA36

The above figures are certified chemical and physical test records as contained in the permanent records of company. We certify that these data are correct and in compliance with specified requirements. This material, including the billets, was melted and manufactured in Canada. CMTR complies with EN 10204 3.1.

BHASKAR YALAMANCHILI
QUALITY DIRECTOR

Phone: (409) 769-1014 Email: Bhaskar.Yalamanchili@gerdau.com

LEONARDO NUNES
QUALITY ASSURANCE MGR

Phone: (905) 668-8811 EXT 4055 Email: Leonardo.Nunes@gerdau.com